NUAL REPORT 1991/1992 ANNUAL REPORT 1991/1992

CORPORATION NEW BRUNSWICK POWER CORPORATION

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15 May 1992

To His Honour
The Honourable Gilbert Finn
Lieutenant-Governor of New Brunswick

Sir:

The New Brunswick Power Corporation begs leave to submit, in accordance with the Electric Power Act, Chapter E-5, of the revised Statutes of New Brunswick 1973, the following report for the twelve-month period ended 31 March 1992.

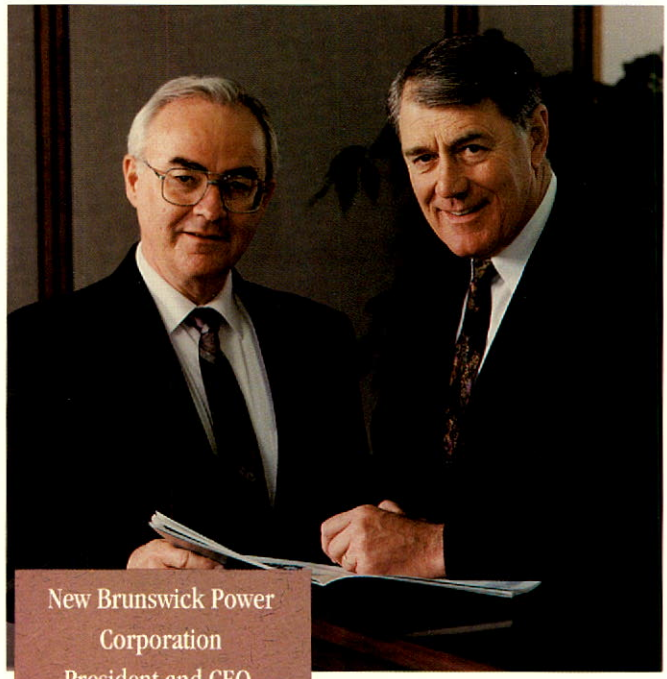
I am, Your Honour,
Yours very truly

J. Raymond Frenette
Chairman
New Brunswick Power Corporation

C O M M E N T S

The 1990s are bringing ever increasing demands for all governments, businesses and individuals to become more efficient and competitive. Although NB Power has a virtual monopoly on the generation and supply of electricity within New Brunswick, we are not immune to these demands and we recognize that our company must be a leader in efficiency and competitiveness not only for the success of the company but also for our customers.

Our product, electricity, is critical to the success of our major industrial customers. Our province, New Brunswick, has one of the most electricity-intensive economies in Canada, or indeed, the world.



New Brunswick Power Corporation President and CEO, G. Linwood Titus (left) and Chairman, J. Raymond Frenette at corporate head office in Fredericton

NB Power has always placed great emphasis upon the quality and reliability of its service and these efforts will continue. In this year's annual report, we will highlight a wide range of projects and programs which we have implemented or are in the process of implementing to meet our customers' needs over the coming decade, while also reducing our impact on the environment.

Our new challenge is to also become as cost effective as we can so that the New Brunswick economy and its major industries can survive and flourish. We will outline the efforts which are already underway to ensure that we meet this challenge.

Progress will not be easy.

In the last seven years, NB Power has only had one general rate increase, averaging 4.4%. Export markets and the benefits they bring are currently clouded by the economic downturn and surplus electrical capacity in New England, although the prospect is brighter for exports in the long term. In-province sales growth has also slowed due to economic conditions. Oil prices and foreign exchange rates, which have gone our way in recent years, are now becoming a source of moderate cost pressures. Major new generation and transmission projects will come on-line in the next two years and we will have to find innovative ways to minimize their impact on our rates.

But we are facing these challenges.

We are looking for new sources of revenue and have had recent successes in sales to neighbouring provinces. We are selling the nuclear expertise that we have developed at Point Lepreau to Romania as that country implements its own CANDU nuclear program. At the same time, we are working with our customers to ensure that electricity is used efficiently.

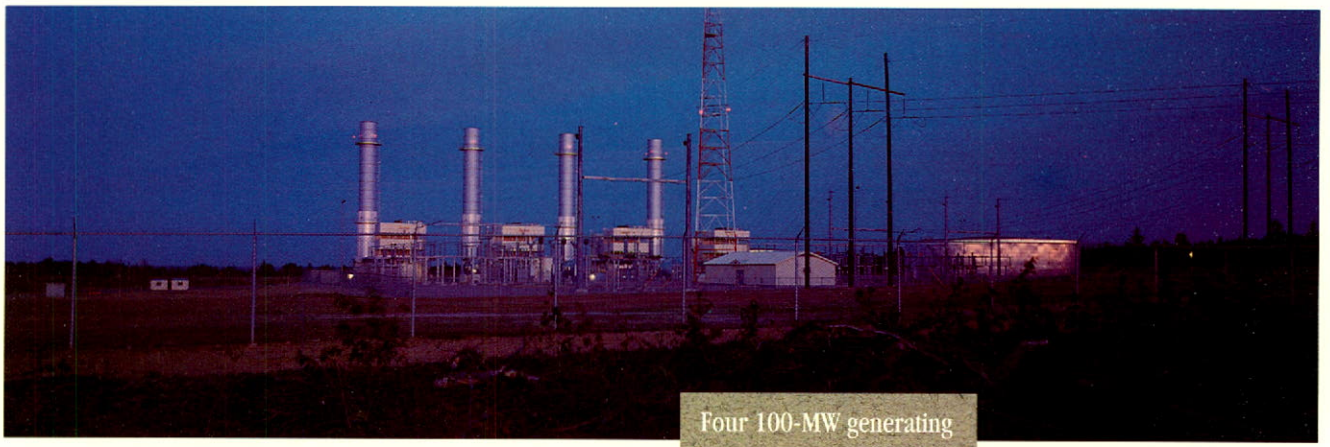
We have also implemented programs to contain our operations, maintenance and administrative costs, including a 5% reduction in staffing levels. Wage rates were not increased during the year and we are striving to keep any increases in the next two years at or below the rate of inflation. We have fundamentally reassessed how we go about our work in the Operating divisions and we are doing the same in Administrative areas now. The steps that have been taken to better manage large construction projects have already borne fruit with the highly successful Millbank and Ste-Rose combustion turbine projects. The Belledune generating station and the Northeast Transmission Project are also benefitting from these new management approaches, as will the Dalhousie Orimulsion™ project.

As a result of our cost containment programs and favourable trends in oil prices and money costs through most of last year, 1991/92 was a successful year financially for NB Power. Net income rose to $25.1 million even after we absorbed the costs of our early retirement program and other measures to reduce future expenses.

Our theme then for this year's annual report is "Preparing for the Future". We hope that we have succeeded in providing you with an informative overview of what we have done and are doing to ensure a reliable, environmentally sound and cost-effective electrical infrastructure for New Brunswick.

Chairman

President &
Chief Executive Officer



Four 100-MW generating units at Millbank commissioned in November 1991

NB Power has always placed great emphasis upon the quality and reliability of its service. Now, in the 1990s, we add a new challenge: to be as efficient and as cost effective as we can so that our customers can survive and flourish in today's competitive and complex business environment. To this end, this past year we concentrated on improving the efficiency of all aspects of our operations. We looked at improving how we supply and distribute electricity; we looked at helping our customers to become more efficient in their use of electricity; and last, but not least, we looked at helping our employees to be more productive in their work.

AN EFFICIENT SYSTEM

System operations

During the fiscal year, NB Power continued its program of equipment additions to the power system to better enable us to meet our objectives of providing a secure, reliable and cost-effective power supply to our customers. The improvements to the system fall into two broad categories: those which are necessary to provide more reliable service, including being able to meet customer load demands without overloading existing equipment; and those which provide diagnostic information to the operators of the power system so that the causes of power interruptions may be more rapidly identified and corrected.

Improvements to provide more reliable service

Four 100-MW generating units at Millbank and a single 100-MW unit at Ste-Rose were commissioned in November 1991. The Millbank units were installed to allow for a 400-MW sale to Hydro-Québec; however, they can also provide winter peaking power in the event of unscheduled outages to other major generating units. These five units are strategically located in the northern part of the province and Ste-Rose can be started up without power from the NB Power system to supply electricity to the entire Acadian Peninsula in the event of a prolonged outage to the 138-kV transmission line which normally supplies this area.

A second 230/138 kV transformer was placed in service in Newcastle to ensure that an adequate power supply can be maintained following the tripping of either of the two 230-kV transmission lines which provide the bulk of the power to the Miramichi area.

Transformer capacity between the 138-kV and 69-kV systems was increased at both Eel River and Newcastle to meet the growing 69-kV loads in these areas and to provide additional margin in the event of a transformer outage at either location.

Reliability of supply to the entire Southwestern area was greatly enhanced by placing in service a second 138-kV transmission line from Coleson Cove into Charlotte County in conjunction with the development of the new 138/69 kV Pennfield terminal.

Plans to shift the supply of customer loads from the older, heavily loaded 69-kV transmission system to the more reliable 138-kV transmission system continued as new substations at Hampton, Vanier, Devon and New Maryland were energized.

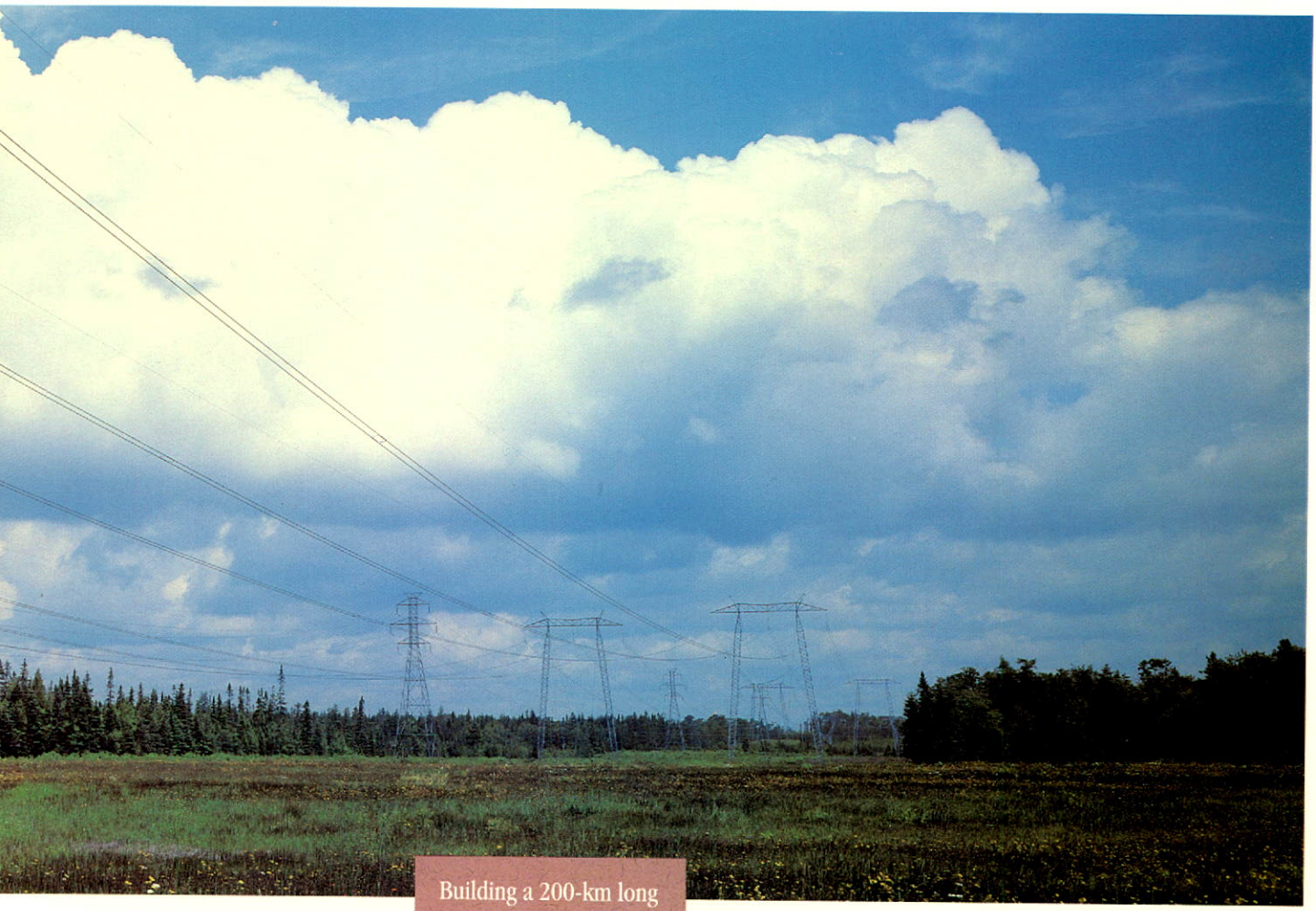
Diagnostic improvements

The addition of state-of-the-art fault-locating relays was accelerated during the year with 10 of these relays being placed in service on 69-kV and 138-kV transmission lines on the western side of the province between Grand Falls and Saint John. When a line fault occurs, the operations engineers can remotely interrogate these relays to obtain information on the fault and its estimated distance from the relay location. Using this data, post fault analyses are done to ensure that protective schemes are working properly. In the future, this information will be used to make informed decisions as to the proper switching actions to take to restore electricity as rapidly as possible to affected customers.

To make it easier to identify equipment shortcomings before they have a detrimental effect on the bulk power transmission system, and the major customer load areas served by this system, new fault recorders were installed in three 345-kV terminals and two 138-kV terminals.

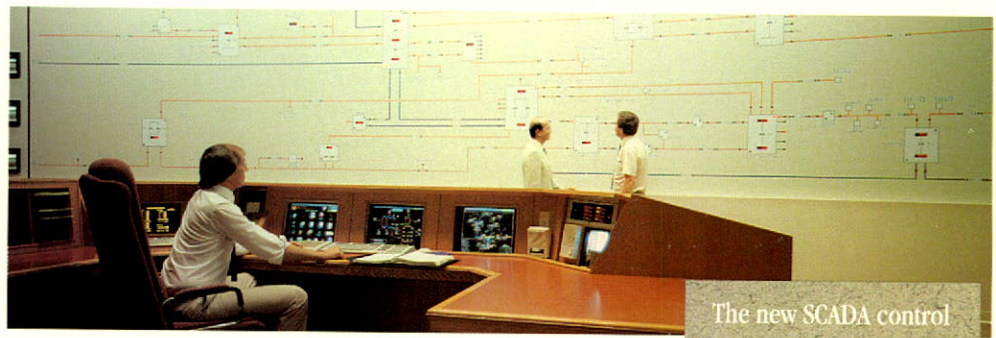
Operating capability of the Energy Control Centre is enhanced

During the year, a new $9.2 million computerized control system for the Energy Control Centre was implemented. SCADA (Supervisory Control And Data Acquisition) allows an Energy Control Centre operator to switch lines in and out of service and to monitor the power flows on transmission lines, transformers, generators and on interconnected lines with other utilities.

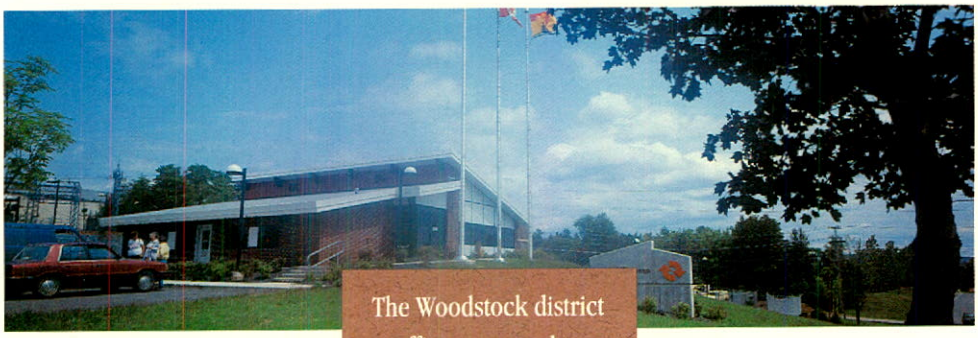


Building a 200-km long 345-kV transmission line from Salisbury to Bathurst will complete the 345-kV "ring" around the province

In addition to SCADA, an energy management system (EMS) was also implemented during the year. EMS is a series of application programs which model the power system and allow the operator to make decisions about the operation and security of the power system on an ongoing basis. Starting with the current conditions on the power system, the operator can study the effects of changes, for example the loss of a generator or the maintenance outage of a transmission line before they occur, thereby avoiding potential problems such as loss of service to customers. Other programs let the operator improve the economic operation of the system. The existing computerized service restoration system, which assists distribution system operations and central telephone answering personnel in responding to trouble calls from customers reporting power outages, is in the process of being linked to SCADA/EMS so that the outages can be displayed automatically on graphic displays representing the distribution lines. In addition to improving the security and reliability of operation, these new computer systems allow for future expansion.



The new SCADA control system at the Energy Control Centre



The Woodstock district office renovated to include a stores facility and maintenance bay

Generating stations and districts

The efficiency of all NB Power generating stations and district offices is continually assessed by an ongoing program of maintenance and upgrading. To control costs associated with the maintenance of distribution lines around the province, a material handling and refurbishing program was set up to review the refurbishing of materials and tools, the salvaging of reusable material, the procedures for retrieving assets and the movement and handling of materials.

Work underway at the Dalhousie generating station which includes a new administration building and a major equipment upgrade will extend the useful life of this station. In Woodstock, the district office was renovated to include a stores facility and a maintenance bay.

The Point Lepreau nuclear generating station has the distinction of being the most efficient nuclear unit in Canada and one of the most efficient in the world. Fiscal 1991/92 was another high-performance year for the generating station with a capacity factor of 97%. Point Lepreau supplied 27% of in-province load and 1564.4 gigawatt-hours in export sales. In September 1991, the first batch of spent fuel was transferred from the water-filled storage bay in the reactor building to onsite concrete canisters. By mid-autumn, 10 canisters had been filled with spent fuel and the remaining 10 canisters will be filled in summer 1992 in conjunction with the construction of 20 more concrete canisters.

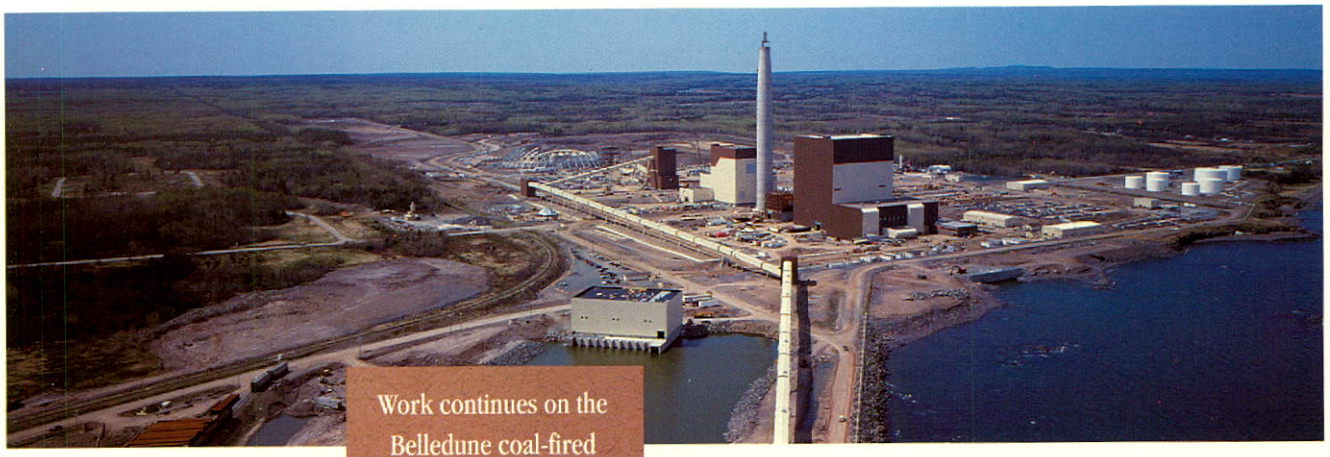
Current projects...

Work is continuing on the Belledune coal-fired generating station. When completed, Belledune will be a showcase generating station with the technology and environmental controls necessary for today's fossil-fuelled power plants. It will be the first generating station in Canada to operate with flue gas desulphurization equipment. To be commissioned in autumn 1993, Belledune will produce cost-efficient electricity well into the next century.

An $86 million Northeast Transmission Project will tie the Belledune generating station into the system. The main part of the project is building a 200-km long 345-kV transmission line from Salisbury to Bathurst. This will complete the 345-kV "ring" around the province. It will increase reliability of service in the Moncton and Bathurst areas and will also reduce losses on the system. The balance of the project consists of associated terminals, substations, transformers and new microwave links.

At the Dalhousie generating station, the existing boilers are being converted from coal and oil to burn Orimulsion™ and a new scrubber will ensure that provincial emission limits for sulphur dioxide are met.

N.B. Coal Limited's new 1260W dragline is now operating at the Coal Creek mine 90 km north of Fredericton. The new dragline replaces two smaller draglines which were retired



Work continues on the Belledune coal-fired generating station to be commissioned in autumn 1993. When completed, Belledune will be a showcase generating station with the technology and environmental controls necessary for today's fossil-fuelled power plants

...And a new project management philosophy

Belledune, the Northeast Transmission Project, and the Dalhousie conversion to Orimulsion™ are all being built under uniform project management, as was Millbank and all other engineering projects at NB Power, regardless of size or type. Uniform project management, which is synonymous with efficiency and consistency, creates a continuous and streamlined approach to all phases of a project. It includes the development of specific standards for technical specifications, equipment installation, design guides, construction completion and commissioning procedures.

A new electronic drawing imaging system has changed the way that drawings are stored, retrieved and revised at NB Power. Three-dimensional modelling on CADD systems ties in the design and construction of large projects such as Belledune, the Northeast Transmission Project and the Dalhousie conversion, resulting in considerable time savings.

Significant advances in project cost management were implemented during the year. A corporate on-line Budget & Cost control system was developed and implemented to facilitate monthly projection updates and proactive decision making.

Future energy options

When the 450-MW Belledune coal-fired plant comes on line in late autumn 1993, we will have the major facilities in place to meet our customer demands to the year 2000. Nevertheless, even with our conservation efforts, we will still need new generation around the turn of the century, depending on our in-province load growth and the development of external markets, so we must begin our planning for this now. We are considering a wide range of alternatives: a second 450-MW coal-fired unit at Belledune; an integrated coal gasification combined cycle unit at Grand Lake (150 MW); hydro development at Grand Falls-Morrell (350 MW); the possibility of a second unit at Point Lepreau identical to the one already in operation or the CANDU-3 type of design; and natural gas in a combined-cycle facility, are all possibilities for development.

HELPING OUR CUSTOMERS THROUGH ENERGY MANAGEMENT AND ECONOMIC DEVELOPMENT

Demand-side management

Our objective is to achieve a mix of economic demand-side management programs and supply-side generating projects which will mean the most reliable service for our customers at competitive rates.

NB Power is a Power Smart utility

In an effort to forestall the need for new generating facilities, our $30 million demand-side management program calls for a reduction in growth of 110 MW by the end of fiscal 1996/97. We hope to achieve this target through a mix of Power Smart programs.

NB Power joined the leading customer-oriented energy conservation program, Power Smart, in July 1991. As one of 24 international members, NB Power shares information and expertise with other utilities and government agencies in an effort to help our customers reduce their electricity bills and use electricity wisely. Current Power Smart programs consist of the Conservation Electrical Improvement Loan, the High-Efficiency Motor Program, the Home Energy Check Program and the R-2000 Home Incentive Program which is currently the most successful in Canada with 11% of all urban housing starts in New Brunswick registered as R-2000 homes. Power Smart programs to be introduced in the near future include a Residential Hot Water Savings Program and a Power Smart Home Renovation Incentive Program. Other programs are under development in the areas of energy-efficient lighting and heat pumps. Our goal is to save 21 Power Smart megawatts in 1992/93.

Energy efficiency and conservation are often unrecognized parts of energy management but industries are now recognizing that they are good business practices. During the year, NB Power continued to encourage large and small industries throughout the province to review their operations and to make changes resulting in a more efficient use of energy. As part of this encouragement, we launched our High-Efficiency Motor Incentive Program and actively promoted the Canadian Electrical Association Industrial Award for Energy Efficiency which was won by Miramichi Pulp and Paper Inc. in 1991.

Industrial Benefits - A Partnership with Industry

During the year, both the Millbank and the Ste-Rose generating stations were completed on time and under budget. The construction phase of the

NB Power is a Power Smart utility. Our overall demand-side management program calls for a reduction of 110 MW by the end of fiscal 1996/97

Millbank project was a significant part of the Province's industrial benefits program which gives New Brunswick companies a greater share of the large construction projects in the province. The major contract for the Millbank station, the supply and erection of combustion turbines, was awarded to Asea Brown Boveri. The Swiss company agreed to an industrial benefits package of some $60 million in indirect benefits, including investment, technology transfers and product export and an additional $20 million in direct benefits such as the awarding of subcontracting work at Millbank to New Brunswick companies.

At the end of February 1992, the contract for the Dalhousie generating station scrubber was awarded to Babcock and Wilcox of Cambridge, Ontario. The agreement contained an industrial benefits package equalling the $30 million contract price. Contracts like these help qualified companies expand and flourish in New Brunswick.

Non-utility Generation

NB Power signed two 30-year contracts for the purchase of capacity and energy from wood-fired stations to be built at Sussex and Kedgwick. The provincial government's development framework released in December 1990, **An Energy Policy 1991-2005**, placed particular emphasis on the potential for non-utility generation and alternative energy sources in the province. The two 30-year contracts are structured to encourage maximum availability of the plants during winter months when customer load demand is the greatest on NB Power's system.

NB Power purchases electricity from other non-utility sources in the province, including purchases from small hydro and industrial cogeneration facilities. The contracts are for a dedicated supply of 5 megawatts or less.

Opportunities for a growing public dialogue

NB Power appeared at a Rate Hearing before the Public Utilities Board (PUB) in July 1991. The Rate Hearing lasted a total of 16 sitting days and concluded on August 13. In its decision, issued in December 1991, the PUB approved a 6.9% increase in rates from January 16 to March 31, 1991 but ordered NB Power to reduce its rates by 2.3% for fiscal year 1991/92 following the drop in oil prices at the end of the Persian Gulf War. This resulted in a rebate to customers for service from April 1, 1991 to January 19, 1992. The resultant net 4.4% increase was the first increase in rates since April 1, 1985. Even with the increase, New Brunswick electricity rates continue to be the lowest in the Maritime provinces and lower on average than rates in other jurisdictions, for example in Ontario which historically has had lower rates than NB Power's.

A generic hearing on the utility's rate structures, and how costs for service are apportioned between the various customer classifications, was held in November 1991. Following this, and subsequent to the end of the fiscal year, a hearing on Customer Service Policies was held in May 1992. This was the last of the seven generic hearings intended to inform the PUB on the operations of the utility. In conjunction with these customer service hearings, regional meetings were held throughout the province providing the public an opportunity to air their views on NB Power.

NB Power has been subcontracted by AECL to undertake a two-year advanced training program for 100 Romanians from the Cernavoda 1 nuclear generating station

MAKING OUR EMPLOYEES MORE EFFICIENT

A new company name...

In May 1991, the Electric Power Act under which NB Power is constituted was amended to incorporate several changes. We have a new company name, New Brunswick Power Corporation. The new name makes it clear to our export customers in the United States that we are a commercial business and not a government committee, the confusion arising from the word "Commission" in our former name. We will also continue to use our business name, NB Power.

Under the new legislation, the former Commissioners are now Directors of the Board and our President is our Chief Executive Officer and an *ex officio* member of the Board.

...And a new organizational structure

In February 1992, changes were made to the executive structure designed to help NB Power enhance its ability to provide quality customer service to the people and businesses of New Brunswick and to manage the increasingly complex issues of the utility business. Roland J. Lutes, C.A., formerly a senior partner in the Toronto office of Ernst & Young, joined NB Power to fill the new position of Senior Vice-President Finance and Administration. In addition the major functions of Operations, Engineering and Construction were consolidated under the general direction of Chuck Baird as Senior Vice-President Engineering and Operations. These changes are part of NB Power's ongoing succession planning and management review process.

Several senior people were among those who took advantage of an early retirement incentive program offered for the end of March. The early retirement program cost the utility $8.0 million but a hundred positions were eliminated as a result of this program saving the utility $6 million in salaries each year, starting in 1992/93. A further 30 positions will be eliminated in head office. N.B. Coal Limited also offered an early retirement program at a cost of $2.6 million, reducing the number of its employees by 24 with annual savings of $800 000 beginning in 1992/93.

Helping employees to be more productive

NB Power is committed to providing its employees with training and development opportunities so they will have the knowledge and skills to do their jobs effectively. For example, during the fiscal year 35 supervisors received a nine-day in-house supervisory development program in basic management skills "Managing for Effective Performance". In addition to in-house development programs, employees are encouraged to develop themselves for present or future career opportunities through an education assistance program in universities and community colleges across the province.

At the Point Lepreau nuclear generating station, a new simulator, a replica of the station's control room, was used extensively for training station staff. The simulator will also play an important role in a two-year training program for 100 Romanians from the Cernavoda 1 nuclear generating station. The first group from Romania arrived at Point Lepreau in early February 1992. NB Power was subcontracted by AECL to undertake this advanced training program.

In addition to training management and technical staff, NB Power currently has 203 employees indentured in 11 apprenticeship programs. NB Power also trains apprentices for electrical contractors, and for other electricity utilities in New Brunswick and Prince Edward Island.

The Employment and Development department has been working on improving the orientation program for new employees. In July 1991 the first Orientation Day was held for new employees. During Orientation Day, new employees receive general information on the company and its various departments and divisions and learn about the many benefits available to employees. So far, 86 new employees have attended six orientation days. The department is also developing an employee handbook, a supervisor's checklist and a new orientation kit.

Our workforce of the future

Each year, NB Power provides employment and opportunities for practical work experience for many students attending universities and community colleges in New Brunswick. In 1991 we hired 20 students from the faculties of Engineering, Business and Computer Sciences. We provided eight engineering students with a professional year of experience in 1991 and we currently have the equivalent of 13 full time positions set aside to allow for the rotation of computer science students. We have also designated 13 positions to allow for the rotation of co-op students enrolled in technology programs at the community colleges. Given that the duration of the practical experience is 4 months, up to 39 co-op students have an opportunity to work at NB Power in the course of a year.

For many years, we have had a successful summer employment program. In summer 1991 we hired 438 students province-wide. While contributing significantly to our operations by replacing regular employees on summer vacation, the summer students gained invaluable experience as many of them worked in an area related to their field of study.

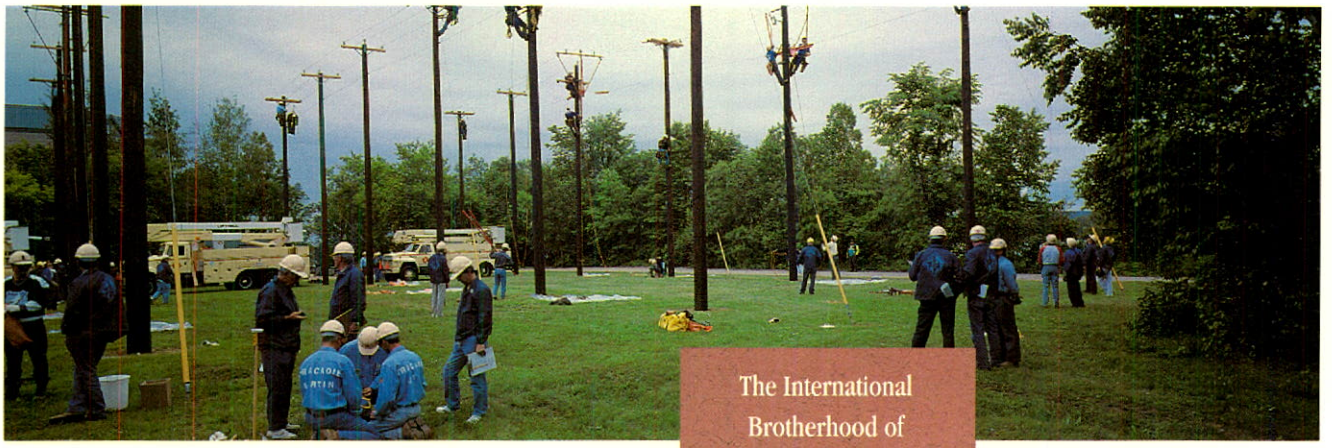
NB Power will provide $300 000 to the Université de Moncton in the form of a trust fund for research in active living and lifestyle in the industrial sector

Health Concerns

NB Power is providing assistance to the Université de Moncton for the development of an innovative program that helps individuals and their companies anticipate and correct health care problems. NB Power will provide $300 000 to the university in the form of a trust fund for research in active living and lifestyle in the industrial sector and has also agreed to implement the Active Living and Lifestyle Program at its head office in Fredericton. The head office program is a pilot program which will eventually be expanded to other locations. It has been estimated that for every dollar invested in active living and lifestyle programs, the long-term return could be up to $11 in reduced health care costs.

Over 25 700 days, or 8.5 days per employee, were nonproductive days due to sick leave and Workers Compensation during the 1991/92 fiscal year.

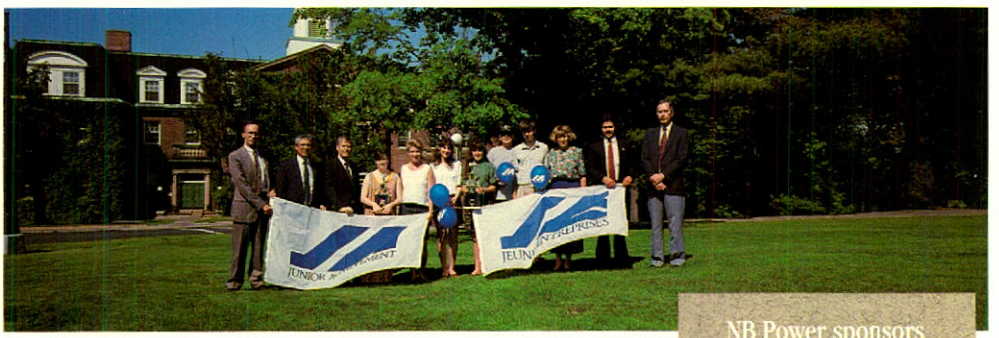
In June 1991, NB Power agreed to fund the Sprayers of Dioxin Association (SODA) in SODA's case against Dow Chemical which supplied chemicals used in spray programs, for example clearing rights-of-way for transmission lines, during the 1950s and 1960s. NB Power took this action to determine if there have been any ill health effects associated with the spray and if so to ensure former employees receive proper compensation. The matter is still before the courts.



The International Brotherhood of Electrical Workers and NB Power host an annual lineworkers competition to promote safety, efficiency and quality workmanship

Company/union activities

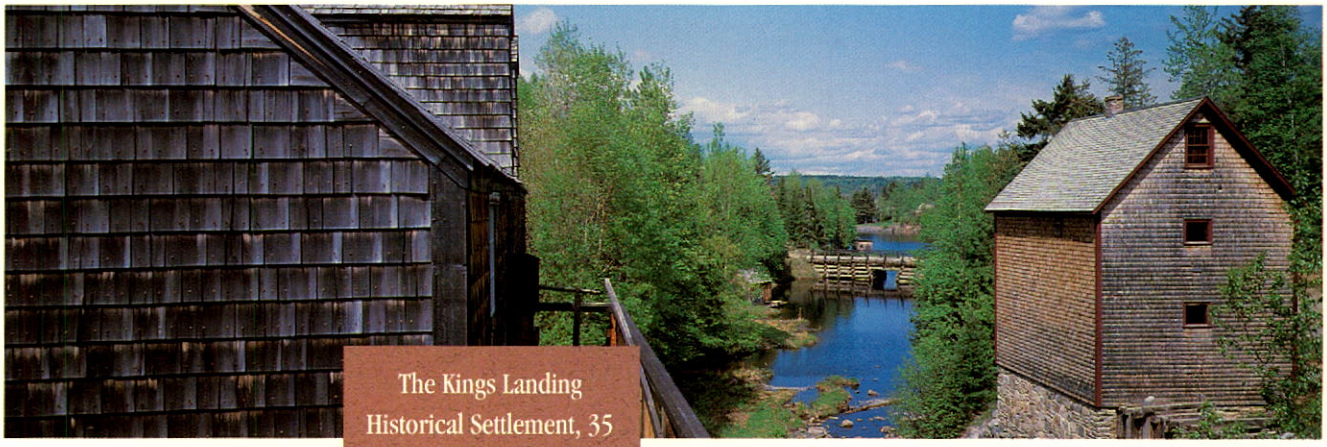
Each year, the International Brotherhood of Electrical Workers and NB Power host a lineworkers competition. The competition promotes safety, efficiency and quality workmanship and the top prize is a trip to the International Lineman's Rodeo, this year held in St. Louis in September. The winners of the Third Annual Lineworkers Competition, a team from the Moncton District, did extremely well at the International Rodeo. The Moncton team came first in the municipal utilities division and fifth overall out of a field of 150 teams from all over North America.



NB Power sponsors Junior Achievement

Bright Beginnings

Recognising that employees are more productive if they know their preschool-age children are in good hands while they are at work, NB Power was happy to agree to donate a building for a daycare, a joint venture between the company and the IBEW. During the year, the IBEW conducted a survey to determine the need and level of support for a workplace day care and since then an employee fundraising committee has been in business to prepare the NB Power building for the day care. The centre will be called "Bright Beginnings".



The Kings Landing Historical Settlement, 35 km west of Fredericton on the Saint John River, is a direct result of the Mactaquac generating station which has allowed the development of one of New Brunswick's most attractive and prosperous tourist areas

Corporate sponsorship of the River Heritage Gallery

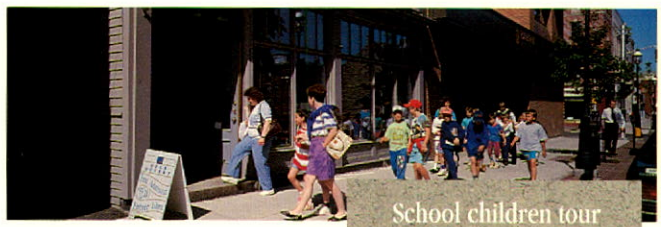
In August 1991, NB Power signed an agreement to sponsor an exhibition gallery at Kings Landing Historical Settlement. The Kings Landing Historical Settlement, 35 km west of Fredericton on the Saint John River, is a direct result of the Mactaquac generating station which has allowed the development of one of New Brunswick's most attractive and prosperous tourist areas.

The sponsorship gives NB Power an opportunity both to present a positive corporate image to visitors from Canada and the United States, and to educate the public on the development of the province's hydro-electric potential and how this has been accomplished in an environmentally benign manner.

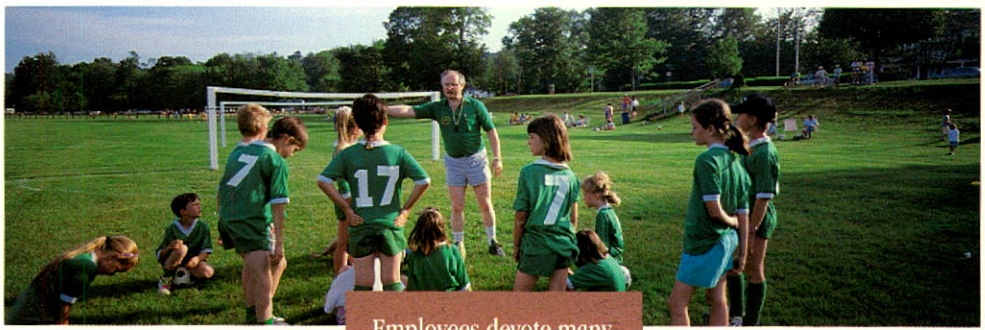
NB Power will provide $150 000 over a three year period to underwrite the costs associated with the research, coordination and marketing of the gallery, called the River Heritage Gallery. The gallery will host a wide variety of historical and cultural exhibitions.

Museum makes history

The NB Power Electricity Museum moved from its original location at the Mactaquac generating station to an historic building in downtown Fredericton. Since opening at its new location in July 1991, the museum's collection of artefacts has increased and every item in the collection has been registered according to accepted museum practices. More than 7000 people visited the museum in its first nine months of operation.



School children tour the museum



Employees devote many hours after work to community activities

Reducing sulphur dioxide emissions

NB Power's sulphur dioxide emission reduction program is well underway and will allow the utility to meet its 1994 SO_2 emission ceiling of 123 000 tonnes. The program has four components:

- the construction of a new 450 MW coal-fired unit at Belledune, equipped with a flue gas desulphurization system or scrubber to ensure that emissions of SO_2 will not exceed the federal performance standards of 0.6 lb. per million BTUs from new generating sources. The Belledune scrubber will be the first utility scrubber in Canada

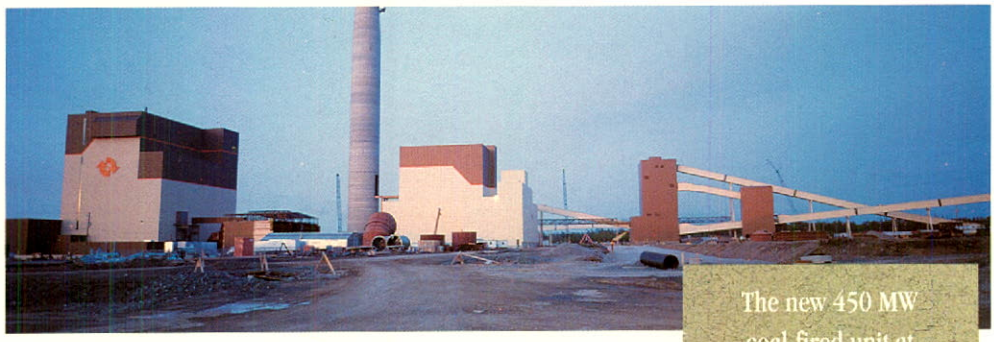
- the construction of a scrubber at the Dalhousie generating station and the conversion of units 1 and 2 at the station from oil and New Brunswick coal respectively to Orimulsion™. The combined effect of these measures will be to reduce SO_2 emission rates by 90% of current levels

- the implementation of a five-year, six-point Energy Conservation and Efficiency program intended to reduce predicted growth in electrical demand by 110 MW

- the use of a lower sulphur oil at the Coleson Cove generating station as required

In addition, the New Brunswick Department of the Environment has mandated the use of low sulphur oil at the Courtenay Bay generating station during the summer which will result in a reduction of some 1000 tonnes per year of SO_2 emissions.

The capital cost of the SO_2 emission reduction program is around $317 million spread over the next few years.



The new 450 MW coal-fired unit at Belledune will be equipped with a flue gas desulphurization system or scrubber to ensure that emissions of SO_2 will not exceed federal performance standards

Monitoring acid rain

We have developed a state-of-the-art acid rain monitoring program in the airshed around our Coleson Cove generating station. This program has run for more than three years, and is providing valuable data regarding the local deposition of acid rain in the Coleson Cove-Saint John airshed. This has been complemented by a two-stage modelling effort in order to estimate how much acid rain Coleson Cove contributes and to determine the relative contribution of more distant sources. Our consultant, Concord Environmental Corporation, submitted the final report on this work in January 1992 and the results were made public a month later. The monitoring-modelling program found that as much as 85% of the acid rain falling on the Saint John airshed is brought in by the prevailing winds from other parts of Canada and the northeastern United States.

During 1992, we expanded our acid rain monitoring program to the northern part of the province, including the Belledune and Ste-Rose areas where new generating stations will be added to our system. This program will provide important information for detecting the effects upon New Brunswick of the 1994 reductions in sulphur dioxide emissions targeted for Eastern Canada and of reductions planned for the United States in the year 2000.

Construction at the Dalhousie generating station

Phasing out PCBs, pesticides and herbicides

To date, NB Power has properly destroyed approximately 50 000 litres of high level PCB liquid and 100 tons of PCB solid waste, and has decontaminated approximately 350 000 litres of low level PCB liquid at a cost of $4.4 million.

We will continue to phase out low level PCB distribution transformers through natural attrition. At present, we decontaminate approximately 250 distribution transformers per year through our regular maintenance program.

Our goal is to be in a position to proceed with the elimination of the utility's total remaining inventory of high level PCB equipment and waste (now stored at secure NB Power sites) when Environment Canada establishes a mobile PCB incinerator in the Atlantic region within the next few years.

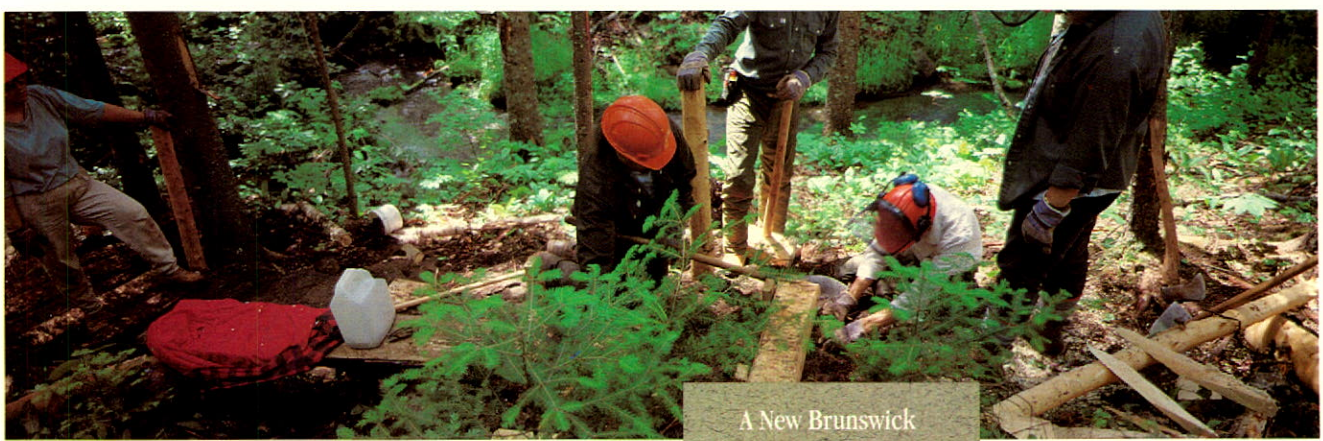
In April 1991, NB Power eliminated the use of all herbicides and pesticides used in its maintenance program for transmission line rights-of-way. Instead, we plan to use mechanical and manual means to keep the vegetation growth down on these rights-of-way.

Environmental protection - a way to plan for the future

Last year, we drafted an environmental protection plan for our transmission facilities to ensure that they are sited, designed, constructed and operated in an environmentally sound fashion. This year, we held seminars on the plan for our construction staff and for contractors and their employees. We wanted to make sure that the people directly involved in all aspects of transmission line projects understood the reasons for sound environmental practices and how they might implement environmental protection measures in the field. In addition to our own environmental staff, we were aided by fisheries management specialists and by staff from federal and provincial regulatory agencies. We have received positive feedback from these seminars.

Helping to keep New Brunswick "The Picture Province"

NB Power coordinated an intergovernmental project that was launched in June 1991 to keep New Brunswick beautiful. Over 600 people were employed during the summer and fall in a wide range of activities such as clearing brush along provincial highways, planting trees, developing nature trails and cleaning up headponds.

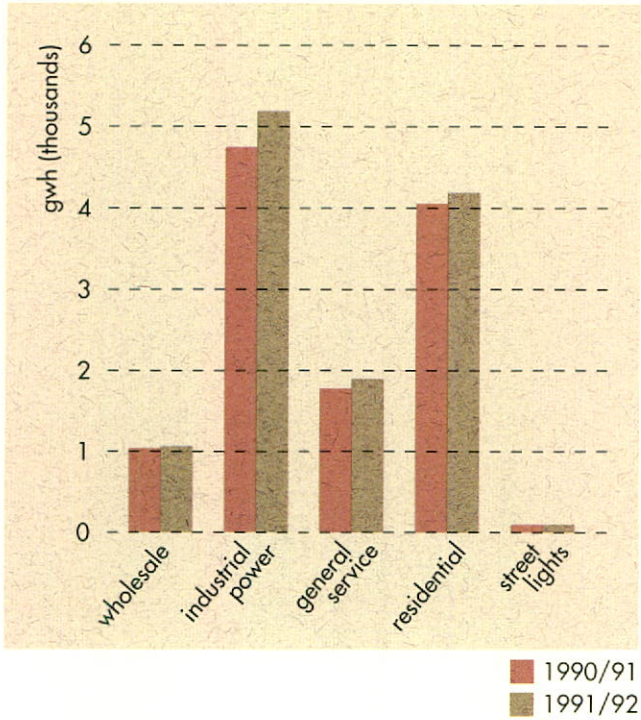


A New Brunswick beautification project. Preparing nature trails at Millbank

Total revenue for fiscal 1991/92 was $923.9 million, an increase of $15.4 million or 1.7% from the previous year.

In-province revenues were up $38.8 million or 6.1%. Energy sales were up 6.2%. The largest increase was in the industrial sector which rose 10.1% year-over-year. This sector had experienced reduced sales in 1990/91 due to labour disruptions and plant refurbishments. Despite the 10.1% increase in energy sales to the industrial sector, the pulp and paper mills, which account for approximately 30% of the in-province sales, remain in a difficult competitive environment. Energy sales to the residential, general service, and wholesale sectors grew by 3.3%, 4.8% and 3.1% respectively. These increases were due in part to the colder than average winter of 1991/92 and warmer than average winter of 1990/91.

In-province Energy Sales by Sector

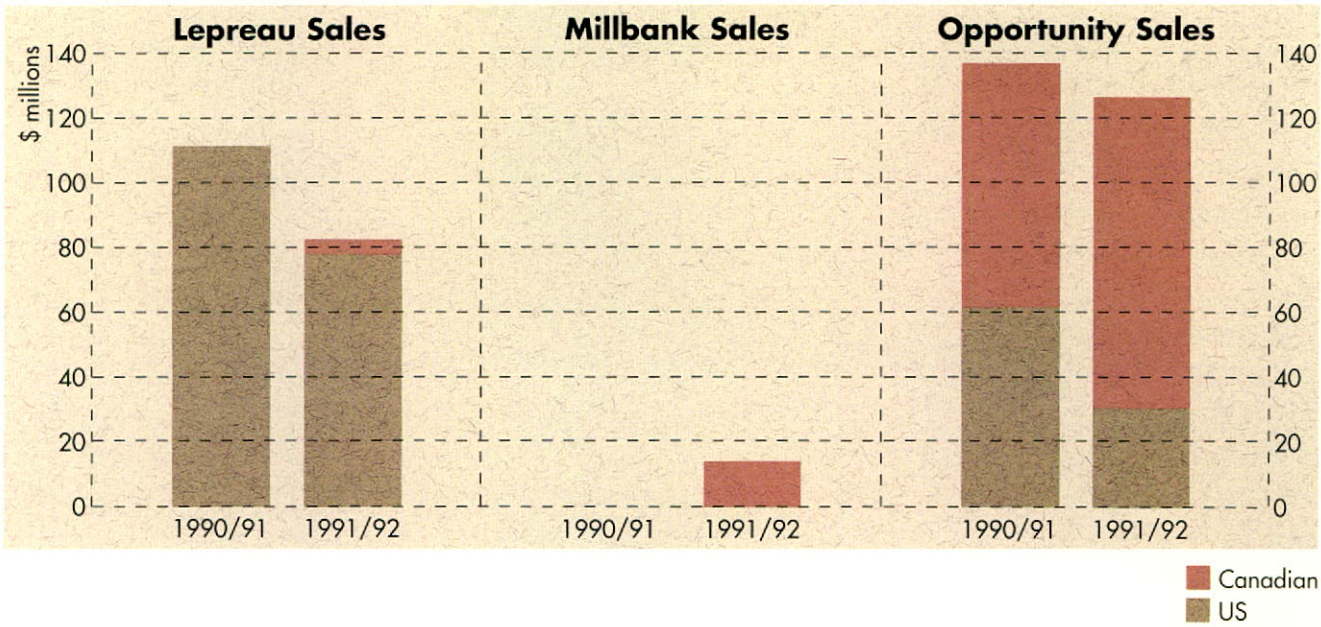


Export sales revenues declined $22.7 million, or 9.2% year-over-year. Revenues from Point Lepreau participation contracts declined by $29.4 million as the 100 MW contract with Boston Edison and the 25 MW contract with Commonwealth Electric, both of Massachusetts, ended on October 31, 1991 in accordance with their terms. A new contract for 20 MW with Maritime Electric of Prince Edward Island commenced during the year. Financial charges payable by the participants also declined mainly as a result of favourable foreign exchange rates.

The Millbank project, consisting of four 100-MW combustion turbines came into service as planned on November 1, 1991. This project was built to supply capacity and energy to Hydro-Québec under a long-term contract commencing that date. Revenue from this sale totalled $17.1 million in 1991/92.

Energy exports increased 1.6% to 5901 GW.h in 1991/92. Despite generally lower selling prices due to lower oil prices, the benefits from opportunity sales increased to $51.7 million from $38.3 million in the previous year. Declining sales to New England customers were offset by increases in sales to Quebec.

Out-of-Province Sales of Power



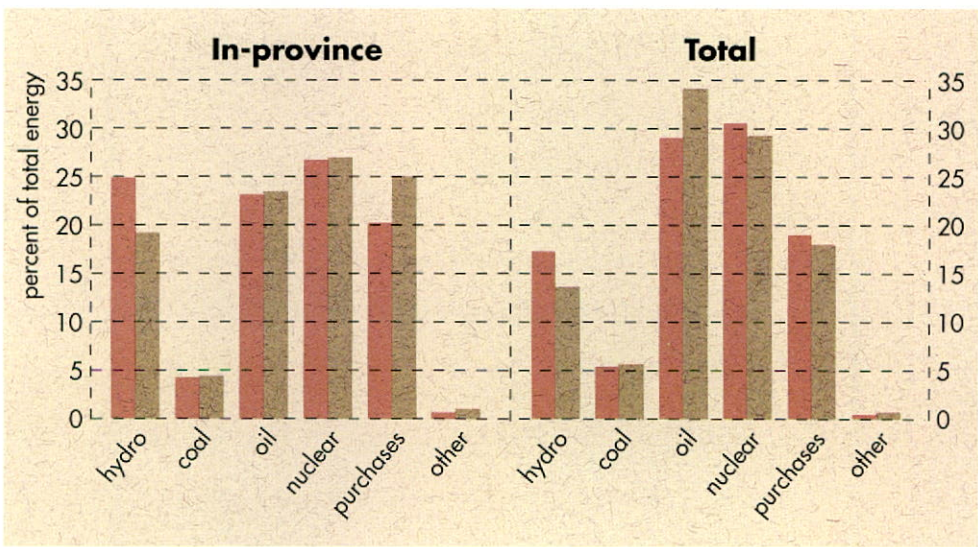
Earnings from export sales to neighbouring utilities were $19.5 million above forecast levels. This amount, less scheduled amortization of higher than forecast earnings of previous years, resulted in a net transfer to the export sales stabilization account from income of $12.9 million.

The total cost of fuel and purchased power decreased by $12.8 million, or 4.2%, to $292.3 million. The mix of energy generated and purchased changed as evidenced in the figures below.

Hydro generation declined but water flows were still above average and $2.0 million was therefore transferred to the Generation Equalization Account. Similarly, nuclear generation declined slightly but, at 97%, was still above the long term expected average of 85%. As a result, $8.3 million was transferred to the Generation Equalization Account.

Operations, maintenance and administrative expenses increased $3.7 million, or 1.4%, to $270.1 million. The costs for 1991/92 include $10.6 million representing the estimated present value cost of enhanced retirement benefits introduced at NB Power and its subsidiary N.B. Coal to help reduce staffing levels. Expenditure restraint efforts are continuing.

Generation and Purchases



Depreciation expenses, which include decommissioning and fuel channel removal charges, increased $7.2 million, or 6.7% to $113.5 million. The five new combustion turbines at Millbank and Ste-Rose, which were brought into service in November 1991, account for $3.5 million of the increase. Point Lepreau depreciation, which escalates at 3% each year, rose $2.9 million. The fuel channel removal charge declined $3.2 million to reflect the level approved for rate purposes by the Board of Commissioners of Public Utilities.

Finance charges decreased $11.9 million, or 5.6% to $199.7 million, primarily due to reduced foreign exchange costs. For most of 1991/92, the Canadian dollar was stronger than during 1990/91 relative to the U.S. dollar and the Swiss franc. Interest expenses are rising due mainly to the capital construction program, but such costs are capitalized until the projects come into service.

Net income rose to $25.1 million from $8.4 million the previous year. All earnings were retained in the business.

Interest coverage using NB Power's formula was 1.10 in 1991/92. The utility has a ceiling target of 1.25x but it frequently targets a lower coverage level when economic conditions or rate increase requirements warrant.

Net property, plant and equipment increased $480.7 million during the fiscal year. Four 100-MW combustion turbines were brought into service at Millbank on November 1, 1991 and one similar unit was completed at Ste-Rose on November 15, 1991. Collectively, these five units accounted for an $80.1 million increase in net assets during the year. Cumulative spending on the 450-MW coal unit at Belledune was $565 million at year-end, up from $220 million at the end of March 1991. Work in progress at March 31, 1992 also included the 345-kV Northeast Transmission Project at $23.6 million ($7.6 million previous year) and the Dalhousie Orimulsion™ project at $15.9 million ($0 million previous year).

Current assets increased from $225 million to $316 million during the fiscal year. Cash and short term investments increased $56 million. Accounts receivable rose $33 million, of which $16 million was due to the commencement of the power sales agreement under which the capacity and energy from the four combustion turbines at Millbank is sold to Hydro-Québec. The increase in accounts receivable also reflects an increase in late payments due to economic conditions. Two large industrial customers in the pulp and paper sector represent $14 million of the increase and they are now paying weekly in advance as a condition of ongoing service.

Deferred charges at year-end stood at $158 million compared to $144 million a year earlier. Unamortized foreign exchange differences accounted for most of the increase as the Canadian dollar weakened relative to its U.S. counterpart. At March 31, 1992, it took $1.1899 Canadian to buy one U.S. dollar. The rate a year earlier was $1.1587.

Net long-term debt increased during the year as a result of new borrowings as follows: $25.0 million, 10.50% debentures due 2001; $75.0 million, 9.75% debentures due 2001; $50.0 million, 9.75% debentures due 2001; $100.0 million, 10.25% debentures due 1996; $150.0 million, 10.125% debentures due 2011; $100.0 million, 9.125% debentures due 2002; $100.0 million, 9.25% debentures due 2002. The call option for U.S. $75.0 million of 10.00% debentures was exercised and financed through the issuance of $24.0 million 7.625% debentures and sinking fund withdrawals.

The average rate of interest on total long-term debt outstanding at March 31, 1992 was 9.7%. This compares to a rate of 9.5% at March 31, 1991. Of total long-term debt outstanding at year-end, 70% was denominated in Canadian dollars, 26% in U.S. dollars and 4% in Swiss francs. The previous year percentages were 59% Canadian, 33% U.S. and 8% Swiss.

Over time we would like to eliminate foreign borrowings in currencies other than U.S. dollars and limit new borrowings in that currency to no more than one-third of our requirements. If borrowings in other currencies are undertaken it is anticipated that swaps would be used to convert the currency exposure into Canadian or U.S. dollars.

Current liabilities increased from $452 million to $546 million. The primary factor was a $102 million increase in current portion of long-term debt. Accounts payable and accruals were $26 million higher due in part to the ongoing major construction program. Accrued interest rose $18 million reflecting increased debt levels as a result of that program.

Deferred liabilities increased $55 million to a year-end level of $465 million. The generation equalization and export sales stabilization accounts increased by $10 million and $13 million, respectively, as noted earlier. The irradiated fuel management, nuclear unit decommissioning and fuel channel removal accounts rose by a total of $20 million reflecting amounts collected from customers during the year, together with interest. Other deferred liabilities increased by $12 million due to recognition of the costs of an early retirement program and due to amounts collected from customers during the year, with interest, to fund the utility's share of the unfunded liability in the Province of New Brunswick's pension plan.

Equity increased by $25 million to a year-end level of $423 million. Using NB Power's formula, this equates to a debt:equity ratio of 87:13. The proportion of debt is expected to rise to between 88% and 89% over the next two years as the capital construction program is completed. We would expect to see an improving ratio thereafter.

MANAGEMENT REPORT

The financial statements of the New Brunswick Power Corporation have been prepared by management in accordance with generally accepted accounting principles as established in Canada. These financial statements are the responsibility of management and have been approved by the Board of Directors. In management's opinion, the financial statements have been properly prepared in accordance with the accounting policies set out in notes to the financial statements. Financial information presented elsewhere in this annual report is consistent with that in the financial statements.

Management depends upon a system of internal controls to ensure that financial information is reliable and accurate and that assets are properly safeguarded. The controls and related systems are periodically reviewed by internal auditors.

The financial statements have been examined by the external auditors, Deloitte & Touche. Their responsibility is to express a professional opinion on the fairness of management's financial statements. The Auditors' Report outlines the scope of their examination and their opinion.

AUDITORS' REPORT

Deloitte & Touche

The Honourable Frank McKenna
Premier of the Province of New Brunswick
Fredericton, New Brunswick

Sir:

We have audited the consolidated balance sheet of New Brunswick Power Corporation as at March 31, 1992 and the consolidated statements of income, earnings invested in the business, and changes in financial position for the year then ended. These financial statements are the responsibility of the Corporation's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with generally accepted auditing standards. Those standards require that we plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In our opinion, these financial statements present fairly, in all material respects, the financial position of the Corporation as at March 31, 1992 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles.

Deloitte & Touche

Chartered Accountants

Fredericton, N.B.
May 15, 1992

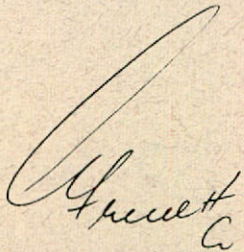
CONSOLIDATED STATEMENT OF INCOME
year ended March 31, 1992 (in thousands of dollars)

	1992	1991
REVENUE		
Sales of power		
In-province	**$677,699**	$638,882
Out-of-province (Note 11)	**225,229**	247,974
Miscellaneous	**20,957**	21,649
	$923,885	$908,505
EXPENDITURE		
Purchased power	**123,025**	113,791
Fuel	**169,247**	191,315
Operations, maintenance, and administration	**270,057**	266,345
Depreciation (Note 12)	**113,478**	106,332
	675,807	677,783
Income before finance charges	**248,078**	230,722
Finance charges (Note 13)	**199,733**	211,585
Income before the following	**48,345**	19,137
Generation equalization adjustment	**(10,321)**	(39,149)
Transfer from (to) export sales stabilization account (Note 8)	**(12,945)**	28,488
	(23,266)	(10,661)
	25,079	8,476
Goodwill written off	**-**	105
Net Income for the Year	**$ 25,079**	$ 8,371

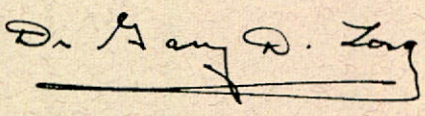
CONSOLIDATED BALANCE SHEET
as at March 31, 1992 (in thousands of dollars)

	1992	1991
PROPERTY, PLANT AND EQUIPMENT (Note 3)		
Land, buildings, plant and equipment, at cost, less accumulated depreciation, and construction-in-progress	**$3,301,947**	$2,821,270
CURRENT ASSETS		
Cash and short-term investments	**57,393**	1,678
Accounts receivable	**160,026**	127,425
Material, supplies and fuel	**93,997**	91,640
Prepaid expenses	**4,773**	4,413
	316,189	225,156
DEFERRED CHARGES		
Unrealized foreign exchange differences, less amounts amortized (Note 4)	**25,789**	8,960
Nuclear unit decommissioning	**102,800**	107,695
Debenture and note discount and issue expenses, less amounts amortized	**27,532**	23,401
Conservation and energy management	**986**	484
Other deferred charges	**1,238**	3,661
	158,345	144,201
	$3,776,481	$3,190,627

On behalf of New Brunswick Power Corporation



Hon. J. Raymond Frenette, *Chairman*



Gary D. Long, *Ph.d, Chairman, Audit Committee*

CONSOLIDATED BALANCE SHEET
as at March 31, 1992 (in thousands of dollars)

	1992	1991
LONG-TERM DEBT (Note 5)		
Guaranteed by the Province of New Brunswick	**$1,188,260**	$1,301,710
Debentures held by the Province of New Brunswick	**1,322,242**	693,293
Other long-term debt - not guaranteed	**27,094**	28,974
	2,537,596	2,023,977
Less payments due within one year	**195,139**	93,144
	2,342,457	1,930,833
CURRENT LIABILITIES		
Short-term indebtedness (Note 6)	**82,491**	138,422
Accounts payable and accruals	**125,081**	99,398
Accrued interest	**116,312**	98,789
Current portion of long-term debt	**195,139**	93,144
Holdbacks on contracts in progress	**26,728**	21,887
	545,751	451,640
DEFERRED LIABILITIES		
Generation equalization account (Note 7)	**157,502**	147,181
Export sales stabilization account (Note 8)	**20,827**	7,882
Irradiated fuel management, nuclear unit decommissioning and fuel channel removal (Note 9)	**259,744**	239,992
Other (Note 10)	**27,091**	15,069
	465,164	410,124
EQUITY		
Generation equalization reserve	**-**	176,000
Earnings invested in the business	**423,109**	222,030
	423,109	398,030
	$3,776,481	$3,190,627

CONSOLIDATED STATEMENT OF EARNINGS INVESTED IN THE BUSINESS
year ended March 31, 1992 (in thousands of dollars)

	1992	1991
Balance, beginning of year	**$222,030**	$213,659
Transfer from generation equalization reserve (Note 7)	**176,000**	-
	398,030	213,659
Net income for the year	**25,079**	8,371
Balance, end of year	**$423,109**	$222,030

CONSOLIDATED STATEMENT OF CHANGES IN FINANCIAL POSITION
year ended March 31, 1992 (in thousands of dollars)

	1992	1991
Net inflow (outflow) of cash related to the following activities:		
OPERATING		
Net income for the year	**$ 25,079**	$ 8,371
Amounts charged or credited to operations not requiring a current cash payment	**122,301**	136,821
	147,380	145,192
FINANCING		
Debt retirements and sinking fund payments	**(98,979)**	(189,071)
Assumption of minority interest share in net liabilities of subsidiary company	**-**	96
Long-term debt obligations issued	**591,485**	349,065
	492,506	160,090
INVESTING		
Expenditure on fixed assets	**(544,238)**	(463,568)
Expenditure on irradiated fuel management	**(2,267)**	(8,021)
Increase in deferred charges	**(847)**	(962)
Acquisition of goodwill	**-**	(105)
Amounts financed by customer contributions and proceeds on disposal of fixed assets	**6,383**	22,150
	(540,969)	(450,506)
Net change in non-cash working capital balances	**12,729**	29,516
Net cash inflow (outflow)	**111,646**	(115,708)
Cash position, beginning of year	**(136,744)**	(21,036)
Cash position, end of year	**$ (25,098)**	$ (136,744)
Represented by		
Cash and short-term investments	**$ 57,393**	$ 1,678
Short-term indebtedness	**(82,491)**	(138,422)
	$ (25,098)	$ (136,744)

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
year ended March 31, 1992 (tabular amounts only are in thousands of dollars)

1. NEW BRUNSWICK POWER CORPORATION

The Corporation changed its name from The New Brunswick Electric Power Commission on June 1, 1991.

2. ACCOUNTING POLICIES

The financial statements have been prepared in conformity with generally accepted accounting principles as established in Canada and give effect to the rate-setting process. The financial statements include the accounts of the Corporation and those of its wholly owned subsidiary, N.B. Coal Limited.

a. Regulation

Effective January 1, 1990, the Corporation became subject to regulation by the Board of Commissioners of Public Utilities of the Province of New Brunswick. The Corporation's charges, rates and tolls for services provided in the province must be approved by the Public Utilities Board.

b. Property, plant and equipment

The cost of additions to property, plant and equipment is the original cost of contracted services, direct labour and material, interest on funds used during construction and indirect charges for administration and other expenses, less credits for the value of power generated during commissioning. Administration and other expenses are capitalized during construction by applying a portion of such overheads to direct construction costs incurred each month.

Interest during construction is capitalized monthly based on the cost of long-term borrowings.

Contributions in aid of construction include amounts received from customers as well as research and development grants in respect of new facilities and are netted against the cost of plant financed thereby. Amounts received from customers are being amortized over the estimated service lives of the related assets, and the resulting credit is offset against the corresponding provision for depreciation.

Depreciation is provided for all assets sufficient to amortize the cost of such assets, less estimated salvage value where applicable, over their estimated service lives. The nuclear generating station is depreciated using an escalating charge method with annual increases based upon a 3% factor. Depreciation is provided on mining equipment under capital lease on an increasing charge basis, the depreciation amount being equal to the principal debt retirement required under the lease obligation, such that the annual depreciation and interest charge to income is the same as the annual lease payments over the life of the lease. All other assets are depreciated on a straight-line basis. Depreciation is provided on the net cost of property, plant and equipment in respect of which grants have been provided. The facility lives of the main categories of property, plant and equipment, which are reviewed periodically, are currently as follows:

Assets	Years
Hydro Generating Stations	100
Thermal Generating Stations	35
Nuclear Generating Station	31
Gas Turbine Generating Station	20
Diesel Generating Station	25
Terminals and Substations	40
Transmission System	35 to 55
Distribution System	32
Buildings	
- General	40
- Head Office	50
Mining equipment	20

Each asset category includes components with service lives less than their related facility life.

The Corporation has made no provision in its accounts to date for the future costs of decommissioning its thermal generating stations. The Corporation has initiated a study to determine the magnitude of these future costs.

c. Inventories

Inventories of materials and supplies are valued at average cost. Oil and nuclear fuel inventory is valued at cost using the first-in, first-out method. Coal inventory is valued at average cost, which includes the costs of direct labour and overhead.

2. ACCOUNTING POLICIES (continued)

d. Debenture and note discounts and premiums, and issue expenses

The Corporation amortizes debenture and note discounts and premiums and the expenses of issues over the lives of the issues to which they pertain.

e. Other deferred charges

Costs incurred which are intended to create a benefit in a future period are deferred and shown in the balance sheet, net of amounts amortized, under deferred charges. The following are the principal categories of such costs:

◆ Costs incurred for conservation and energy management;

◆ Other deferred charges, which include:

- survey and engineering expenses relating to construction projects being considered;
- preproduction and net development costs relating to mining operations;
- certain training costs associated with the development of new facilities;
- the costs of major geological studies undertaken to establish the location and quality of coal deposits.

Conservation and energy management charges are amortized against future income over the periods expected to benefit from the programs carried out. Costs relating to new construction projects continue to be deferred until a project is authorized for construction by the Corporation or is cancelled. They are then amortized against future income either by annual depreciation charges, resulting from certain of the items being capitalized, or directly, over an appropriate period of time not exceeding five years. All other deferred charges are amortized against future income over an appropriate period of time not exceeding five years.

f. Foreign exchange transactions

Monetary assets and liabilities denominated in foreign currencies are translated to Canadian dollars at rates of exchange prevailing at the balance sheet date except where such items have been hedged by the acquisition of a forward exchange contract, in which case the rate established by the terms of the contract is used in the translation. Unrealized losses or gains arising on translation of long-term items are amortized to income on a straight-line basis over the remaining life of the related monetary assets or liabilities, except that amounts associated with the financing of major construction projects still in progress are deferred until the project is completed before being amortized over the then remaining life of the related monetary liabilities. The unamortized balance of the deferred exchange gains or losses is accumulated in an unrealized foreign exchange account which is shown on the balance sheet under deferred charges.

Exchange gains or losses resulting from transactions affecting current operations are reflected in income as realized.

g. Revenue

Billings to residential and general service customers are rendered monthly on a cyclical basis. All other customers are billed at the end of each month. Revenue in respect of items not billed at the end of a fiscal period is estimated and accrued.

h. Deferred costs or revenues

The Corporation's power rates are established annually to recover its operating costs and a return on its investment consistent with prudent financial management. Each year certain factors relating to water flow conditions, nuclear operating performance and export sales transactions, which are largely outside the control of the Corporation, may result in costs or revenues which vary from those originally included in the calculation of revenue requirements. The Corporation accounts for such variations through a Generation Equalization Adjustment and an Export Sales Stabilization Account.

2. ACCOUNTING POLICIES (continued)

Generation Equalization Adjustment

In order to equalize the fluctuations in generating costs caused by variations from average water flow conditions and nuclear operating performance, the Corporation annually charges or credits income with an amount calculated to adjust such costs to an average value. The offsetting debit or credit is included in the generation equalization account. The calculation of the adjustment is based on historical water flow data compiled over a period of 35 years and on the performance expectations of the nuclear generating station developed from comparable industry statistics and the operating experience of the nuclear unit itself.

Export Sales Stabilization Account

The Corporation annually charges or credits income with the difference between actual and forecast earnings on export sales transactions, other than those under participation or ownership contracts, with neighbouring utilities. The offsetting debit or credit is included in the Export Sales Stabilization Account. Amounts deferred for years to March 31, 1990 are being brought into the calculation of future revenue requirements in equal amounts over a period of three years and amortized to the income statement on this basis. Amounts deferred for years commencing March 31, 1991 are being amortized over a two year period.

i. Irradiated fuel management, nuclear unit decommissioning and fuel channel removal

In order to provide for the estimated future costs of permanently disposing of irradiated nuclear fuel and decommissioning the nuclear generating station to return the site to a state of unrestricted use, the Corporation annually charges income with amounts calculated to be adequate, when accumulated with interest, to cover the total costs of these future activities as they occur. The calculations of the anticipated future costs are based on a detailed study which takes into account various assumptions regarding the method and timing of dismantlement of the nuclear facility, the cost of transportation of nuclear material to permanent disposal facilities, and estimates of interest and inflation rates in the future. With respect to irradiated nuclear fuel, the annual charge is related to the amount of nuclear fuel consumed while the decommissioning requirements are on the basis of equal annual amounts over the life of the unit.

The Corporation is also providing through an annual charge to income for the estimated future costs of removing fuel channels at the nuclear generating station for replacement. The anticipated future costs have been calculated based on the experience already developed by another Canadian electric utility and on the assumption that fuel channel replacement will become necessary in 1998.

Costs incurred on a current basis relating to irradiated fuel management, nuclear unit decommissioning and fuel channel removal are charged directly against the deferred liability account.

The Corporation is accounting for these transactions through means of deferred asset and deferred liability accounts. The total amount required to be collected over the life of the unit to cover decommissioning activities was recorded in these accounts as of the date the nuclear unit was placed in service. The deferred asset account is reduced annually by the amount collected from customers for decommissioning. The deferred liability account is increased each year by the amount collected

2. ACCOUNTING POLICIES (continued)

from customers to cover fuel channel removal and disposal of irradiated nuclear fuel consumed during the year and by interest, compounded annually, on the accumulated amounts collected. Interest is calculated at the Corporation's long-term borrowing rate and is charged to income annually. Both accounts are adjusted periodically to reflect changes in amounts to be collected from customers as a result of revisions to the decommissioning estimate.

In view of potential developments in the technology of decommissioning, fuel channel removal and irradiated fuel management, and because of the various assumptions and estimates inherent in the calculations, the Corporation reviews such calculations periodically, making adjustments as necessary on a prospective basis.

j. Pension plans

Corporation employees belong to the Province of New Brunswick Public Service Superannuation Plan. This multi-employer plan provides pensions based on length of service and average of the highest five consecutive years of earnings. The Corporation and its employees make contributions to the plan as prescribed in the Public Service Superannuation Act. During the year, contributions to the plan of $7,597,000 (1991 - $7,009,000) were charged against income.

The Corporation's share of the Province's unfunded pension obligation amounted to $139,310,000 as at March 31, 1992 (1991 - $129,000,000). Based on this estimate, the Corporation annually charges income with amounts calculated to be adequate, when accumulated with interest at a rate specified by the Province, over a 25 year period, to fund the estimated obligation. As of March 31, 1992, $20,184,000 has been collected and will be remitted to the Province of New Brunswick as a contribution towards the Corporation's share of the unfunded liability.

N.B. Coal maintains a contributory defined benefit pension plan for its employees. Pension costs are actuarially determined each year using the projected benefit method pro-rated on services and management's best estimate assumptions. Adjustments arising from plan amendments, experience gains and losses, changes in actuarial assumptions and the difference between the actuarial present value of accrued pension obligations and the market related value of pension assets are amortized on a straight line basis over the expected average remaining service lives of the respective employee group. The market-related value for pension plan assets is the estimated market value as at March 31, 1992. The actuarial present value of accrued pension benefits was fully funded at March 31, 1992.

3. PROPERTY, PLANT AND EQUIPMENT	1992	1991
Land, buildings, plant and equipment, at cost		
Power generating stations	**$ 2,638,611**	$ 2,367,349
Transmission system	**194,931**	185,016
Substations	**301,451**	262,711
Distribution system	**487,081**	453,331
Other properties	**46,974**	44,819
Communications equipment	**10,797**	10,523
Mining equipment and related assets *	**72,559**	56,568
Motor vehicles and miscellaneous equipment	**69,119**	64,823
	3,821,523	3,445,140
Less: Contributions in aid of construction	**20,666**	19,761
Research and development grants	**72,000**	72,000
	92,666	91,761
	3,728,857	3,353,379
Less: Accumulated depreciation	**1,083,282**	984,982
	2,645,575	2,368,397
Construction-in-progress	**656,372**	452,873
	$ 3,301,947	$ 2,821,270

* Includes $35,312,000 (1991 - $35,672,000) being the gross amount of assets under capital lease. Accumulated depreciation includes $15,801,000 (1991 - $13,521,000) with respect to these assets.

4. UNREALIZED FOREIGN EXCHANGE DIFFERENCES, LESS AMOUNTS AMORTIZED	1992	1991
Exchange adjustment at balance sheet date		
On debentures and notes issued by the Corporation		
Payable in Swiss francs	**$ 36,331**	$ 68,483
Payable in United States dollars	**54,917**	57,721
On other debentures issued		
Payable in United States dollars	**5,383**	(7,456)
Exchange adjustment on assets denominated in foreign currencies held in sinking funds maintained by the Province of New Brunswick	**3,588**	9,833
	100,219	128,581
Less accumulated amortization	**74,430**	119,621
	$ 25,789	$ 8,960

5. LONG-TERM DEBT

Guaranteed by the Province of New Brunswick

Debentures and notes issued by the Corporation

Date of maturity	Canadian	Swiss	U.S.	**1992**	1991
Years ending:					
March 31 1992	$ -	$ -	$ -	**$ -**	$ 113,708
March 31 1993	100,000	99,062	45,008	**244,070**	243,340
March 31 1994	6,000	-	21,210	**27,210**	26,654
March 31 1995	13,790	-	74,755	**88,545**	86,585
March 31 1996	60,300	-	9,311	**69,611**	69,367
March 31 1997	26,100	-	16,748	**42,848**	-
1-5 Years	206,190	99,062	167,032	**472,284**	539,654
6-10 Years	162,884	-	138,802	**301,686**	124,585
11-30 Years	425,000	-	148,738	**573,738**	872,610
Debentures and notes	$794,074	$ 99,062*	$ 454,572**	**1,347,708**	1,536,849
Sinking funds				**525,498**	583,581
				822,210	953,268

* SFr 125,000,000

** U.S. $382,025,000

The weighted average interest rate on debentures and notes outstanding at March 31, 1992 is 9.5% (1991 - 9.2%)

Atomic Energy of Canada Limited - note payable in equal annual instalments of principal and interest at 9.7064% per annum to the year 2008	**307,919**	315,032
Northern Canada Power Commission - loans repayable in annual instalments of principal and interest at rates varying from 4 1/2% to 8 1/2% per annum to the year 2011	**30,971**	33,410
Mitsui & Co. (Canada) Ltd. - notes payable in ten equal semi-annual instalments of principal commencing September 1, 1994, interest payable at 10.75% per annum.	**27,160**	-
Total guaranteed by the Province of New Brunswick	**$1,188,260**	$1,301,710

5. LONG-TERM DEBT (continued)

Debentures held by the Province of New Brunswick

Year of Maturity	Canadian	U.S.	1992	1991
Years ending:				
March 31, 1996	$ 50,000	$ 48,786	**$ 98,786**	97,506
March 31, 1997	100,000	-	**100,000**	-
1 - 5 years	150,000	48,786	**198,786**	97,506
6 - 10 years	575,000	28,558	**603,558**	225,000
11 - 30 years	250,000	285,576	**535,576**	378,088
Debentures outstanding	$975,000	$362,920*	**1,337,920**	700,594
Sinking funds			**15,678**	7,301
			$1,322,242	$693,293

* U.S. $305,000,000

The weighted average interest rate on debentures held by the Province of New Brunswick at March 31, 1992, is 9.9% (1991 - 10.1%)

Other long-term debt — not guaranteed		
Government of Canada — payable in equal annual instalments of principal and interest at rates varying from 9 1/4% to 9 5/8% per annum to the year 2011	**$ 5,669**	$ 5,777
Obligations under capital lease		
Dragline lease of N.B. Coal payable together with interest at 9.79% per annum in equal semi-annual instalments to the year 1999, subject to rate renegotiation at December 31, 1994	**20,441**	21,929
Other	**984**	1,268
	21,425	23,197
Total other long-term debt — not guaranteed	**$27,094**	$28,974

5. LONG-TERM DEBT (continued)

Long-term debt payments

Long-term debt maturities (after deducting sinking funds estimated to be available at maturity inclusive of actual earnings to March 31, 1992 and future earnings calculated at projected interest rates) and sinking fund requirements, and minimum lease payments, in respect of debt outstanding at March 31, 1992 are as follows for the five years ending March 31, 1997, using exchange rates in effect at March 31, 1992 for debt denominated in foreign currencies:

	Debt maturities and sinking fund obligations	Minimum lease payments
Year ending March 31, 1993	$195,291	$ 3,998
Year ending March 31, 1994	31,179	3,868
Year ending March 31, 1995	93,069	3,739
Year ending March 31, 1996	84,464	3,458
Year ending March 31, 1997	135,750	3,458
Years ending March 31, 1998 - 2000		13,601
Total minimum lease payments		32,122
Less amount representing implicit interest		10,697
		$21,425

Sinking funds

The Minister of Finance of the Province of New Brunswick, as Trustee for the Corporation, maintains a sinking fund for all debenture issues requiring same. Sinking fund earnings are reflected in the Corporation's income. Corporation debentures held in the fund are not cancelled until maturity.

6. SHORT-TERM INDEBTEDNESS

Short-term borrowings from banks are payable on demand and are reflected on the balance sheet, together with outstanding cheques, under the caption "Short-term indebtedness". The Corporation has bank lines of credit, guaranteed by the Province of New Brunswick, for short-term borrowings totalling $120,000,000. In addition, the Corporation borrows funds for temporary purposes from other sources from time to time including the Province of New Brunswick.

N.B. Coal has bank lines of credit which are secured by a general assignment of book debts, assignment of inventory under Section 178 of the Bank Act, and a chattel mortgage on certain assets.

The total of all short-term borrowings was $67,737,000 at March 31, 1992 (1991 - $128,299,000).

7. GENERATION EQUALIZATION ACCOUNT	1992	1991
Balance, beginning of year	**$147,181**	$108,032
Generation equalization adjustment	**10,321**	39,149
Balance, end of year	**$157,502**	$147,181

In previous years, in addition to the annual adjustment to generation cost described in note 2.h., the Corporation established a generation equalization reserve by appropriations from earnings invested in the business. The purpose of this reserve was to indicate the minimum level of equity which should be maintained in the event of unfavourable water flow conditions and nuclear operating performance prevailing for an extended period.

In its May 1991 decision concerning the Accounting and Financial Policies of the Corporation, the Public Utilities Board approved, for rate making purposes, the continued operation of the Generation Equalization Account. Future costs of replacement power due to unfavourable water flow conditions and nuclear operating performance will accordingly be accounted for through the generation equalization adjustment account. Therefore, effective March 31, 1992, the generation equalization reserve amounting to $176,000,000 has been transferred back to earnings invested in the business.

8. EXPORT SALES STABILIZATION ACCOUNT	1992	1991
Balance, beginning of year	**$ 7,882**	$36,370
Excess of actual over forecast (forecast over actual) earnings from export sales for year	**19,549**	(12,603)
Amount amortized	**(6,604)**	(15,885)
	12,945	(28,488)
Balance, end of year	**$20,827**	$ 7,882

The amortization period for deferral of excess earnings was changed in the current year from three years to two years, following a decision announced by the Public Utilities Board. Had the change not been made, the amount amortized for the year ended March 31, 1992 would have been $8,704,000, resulting in an increase of $2,100,000 in net income for the year.

9. IRRADIATED FUEL MANAGEMENT, NUCLEAR UNIT DECOMMISSIONING AND FUEL CHANNEL REMOVAL	1992	1991
Balance, beginning of year	**$239,992**	$226,251
Amounts collected from customers to cover cost of		
- fuel channel removal	**2,080**	5,300
- disposal of nuclear fuel consumed during the year	**3,135**	2,600
- interest	**16,804**	13,862
	262,011	248,013
Less expenditures incurred for interim storage of irradiated nuclear fuel	**(2,267)**	(8,021)
Deferred liability account for irradiated fuel management, nuclear unit decommissioning and fuel channel removal	**259,744**	239,992
Less deferred asset account for nuclear unit decommissioning	**102,800**	107,695
Net amount collected from customers	**$156,944**	$132,297

Charges for irradiated fuel management, nuclear unit decommissioning and fuel channel removal, including interest, are brought into the calculation of revenue requirements each year and collected from in-province and interconnected customers through sales of power. The net amount collected, after deducting costs incurred to date for these activities, is represented by the difference between the liability account and the deferred asset account for nuclear unit decommissioning. This amount is currently being utilized by the Corporation as a source of funds.

In its May 1991 decision concerning the Accounting and Financial Policies of the Corporation, the Public Utilities Board directed that, for rate making purposes, an additional $16,000,000 be withdrawn from earnings invested in the business for fuel channel removal costs and that future charges be recomputed accordingly. This adjustment has reduced the charge for the year ended March 31, 1992 from $5,300,000 to $2,080,000, and increased the amount of interest charged to income and added to the deferred liability account by $1,614,000.

The Corporation disagrees with the concept of retroactive ratemaking and will be requesting the Public Utilities Board to reconsider its decision at an upcoming hearing. The Corporation has accordingly processed the revised charges to income, since these charges have been used in the determination of revenue requirements for the year, but has not processed the retroactive adjustment to earnings invested in the business pending final resolution of this matter.

10. DEFERRED LIABILITIES - OTHER	1992	1991
Unfunded pension obligation	**$20,184**	$14,857
Early retirement program	**7,910**	-
N.B. Coal land reclamation costs	**512**	212
	28,606	15,069
Less: Amounts due within one year	**1,515**	-
Balance, end of year	**$27,091**	$15,069

11. SALES OF POWER

Out-of-province sales of power include $108,108,000 (1991 - $171,520,000) to utilities in the United States. The price of these sales includes incremental fuel and operating costs plus a margin of net benefit to the Corporation.

12. DEPRECIATION	1992	1991
Depreciation expense	**$106,503**	$ 96,137
Charges for decommissioning	**4,895**	4,895
Charges for fuel channel removal	**2,080**	5,300
	$113,478	$106,332

13. FINANCE CHARGES	1992	1991
Interest expense	**$303,650**	$271,815
Less: Income from sinking funds and other investments	**63,875**	67,648
	239,775	204,167
Provincial government guarantee fee	**13,778**	12,000
Amortization of debenture discount and expense	**3,470**	2,563
Amortization of unrealized foreign exchange	**(3,317)**	15,936
	253,706	234,666
Less: Interest capitalized	**53,973**	23,081
	$199,733	$211,585

14. CAPITAL COMMITMENTS

The Corporation is constructing a 450-megawatt thermal generating unit at Belledune. The estimated cost of the Belledune generating unit is $965,000,000. Expenditures to March 31, 1992 amounted to $565,506,000 (1991 - $220,619,000).

The Corporation is installing a scrubber and is converting its Dalhousie generating station to facilitate the burning of Orimulsion™ fuel. The estimated cost of the program is $338,000,000. Expenditures to March 31, 1992 amounted to $15,864,000 (1991 - Nil).

15. SUBSEQUENT EVENTS

On May 5, 1992, the Corporation issued U.S. $100,000,000 debentures, repayable on May 1, 2022, bearing interest at 8 3/4%, to the Province of New Brunswick.

On May 13, 1992, the Corporation made a commitment to issue on June 16, 1992 $100,000,000 debentures, repayable on June 16, 1997 bearing interest at 8 3/4%, to the Province of New Brunswick.

Managing Officers

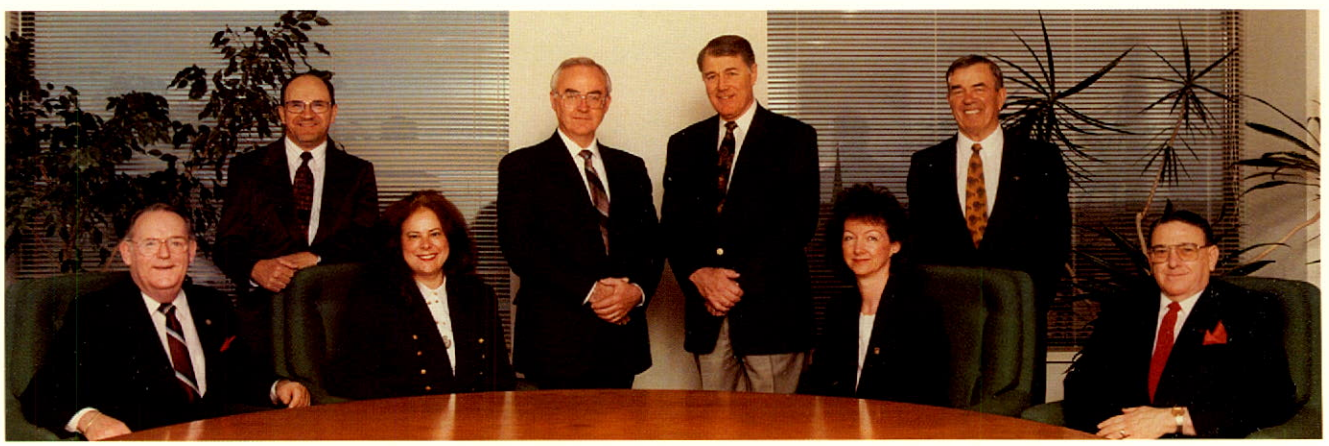
Roland Lutes
Senior Vice-President, Finance & Administration

G. Linwood Titus
President & Chief Executive Officer

Charles F. Baird
Senior Vice-President, Engineering & Operations

Peter J. Dykeman, Q.C.
Corporate Secretary

Board of Directors



(left to right): Bill Malenfant, Richard Duguay, Brenda Pirie Seheult, G. Linwood Titus, J. Raymond Frenette, *Chairman*, Jeanne Comeau, George Lloyd, Nathan Rubin, *(missing from photo):* Tim Isaac, Gary Long, Elaine Wright

Statement of Generation and Sales (millions of kilowatt hours)

Generation — Fiscal year	1991/92	1990/91	1989/90	1988/89	1987/88
Hydro	2719.8	3333.7	2432.9	2302.2	2113.1
Thermal	8036.5	6506.3	9320.1	7898.2	5586.0
Nuclear	5793.1	5857.5	5498.1	5747.0	5453.4
Combustion turbine	96.3	1.4	10.3	2.0	2.8
Purchases	3573.9	3620.0	3913.8	3359.9	5745.2
Gross generation & purchases	20219.6	19318.9	21175.2	19309.3	18900.5
Station service	941.8	882.7	1008.0	947.1	838.0
Net generation & purchases	19277.8	18436.2	20167.2	18362.2	18062.5
Losses — transformer & transmission	614.3	646.5	666.2	651.6	632.7
Total energy available for distribution	18663.5	17789.7	19501.0	17710.6	17429.8

Sales					
Wholesale	1055.9	1023.8	1028.0	971.4	911.6
Industrial power	5196.0	4719.8	5180.8	5069.4	4960.8
General service	1871.4	1786.2	1740.2	1633.4	1498.5
Residential	4187.8	4053.9	3965.5	3734.1	3361.0
Street lights	71.0	71.0	67.3	63.2	60.6
Total in-province sales	12382.1	11654.7	11981.8	11471.5	10792.6
Interconnections	5901.2	5812.9	7190.7	5946.4	6312.0
Grand total sales	18283.2	17467.6	19172.5	17417.9	17104.6
Internal use	0.0	0.0	0.4	0.4	0.4
Distribution losses	380.2	322.1	328.1	292.3	324.8
Total energy distributed & sold	18663.5	17789.7	19501.0	17710.6	17429.8

Statement of In-province Generation (millions of kilowatt hours)

Fiscal year —	1991/92	1990/91	1989/90	1988/89	1987/88
Hydro	2698.4	3332.3	2423.3	2301.9	2113.1
Coal	690.1	633.8	852.4	633.0	502.7
Heavy fuel oil	3278.4	3072.9	4254.5	3634.0	2916.7
Orimulsion™	106.0				
Nuclear	3795.7	3524.0	3380.9	3537.3	3453.7
Other (Chatham)	10.5	49.4			
Combustion turbine	71.7	0.4	3.1	0.6	0.8
Purchases	3553.0	2753.9	2930.1	3112.6	3514.6
Gross generation & purchases	14203.8	13366.7	13844.3	13219.4	12501.6
Station service	827.4	743.4	867.8	803.6	751.1
Net generation & purchases	13376.4	12623.3	12976.4	12415.8	11750.5
Losses — transformer & transmission	614.3	646.5	666.2	651.6	632.7
Total energy available for distribution	12762.1	11976.8	12310.2	11764.2	11117.8

Peak Demand and Capacity (megawatts)

Fiscal year —	1991/92	1990/91	1989/90	1988/89	1987/88
System net generating capacity	3725	3225	3224	3172	3172
Firm capacity purchases	105	155	105	55	5
Total available resource	3830	3380	3329	3227	3177
In-province system net peak	2728	2566	2562	2303	2336
Firm exports	540	265	355	520	360
Total demand	3268	2831	2917	2823	2696

Operating Statistics

March 31 —	1992	1991	1990	1989	1988
Kilometres transmission lines	6451	6329	6277	6255	6259
Kilometres distribution circuits	25539	25097	24601	24555	24155
Number residential customers	253621	249639	245449	239598	234572
Number industrial customers	1592	1561	1558	1695	1637
Number general service customers	21909	21789	21233	20425	19806
Number street light customers	3294	3141	3002	2741	2556
Direct customers	280416	276130	271242	264459	258571
Indirect customers	40019	39941	39494	39081	38773
Total customers	320435	316071	310736	303540	297344
Number of employees — regular	2753	2729	2625	2492	2410
Number of employees — temporary	410	358	222	173	122

Income Statement Summary (in $millions)

Fiscal year — 1991/92		1990/91	1989/90	1988/89	1987/88
Sale of power					
In-province revenue	677.7	638.9	626.5	597.4	564.6
Out-of-province	225.2	248.0	311.6	240.9	285.1
Miscellaneous	21.0	21.6	19.4	18.0	17.3
Total fuel and purchases	292.3	305.1	368.1	274.3	306.8
Operations, maintenance, and administration	270.1	266.3	244.7	221.1	199.3
Net financial	199.7	211.6	197.5	200.4	238.1
Depreciation & decommissioning	113.5	106.3	104.8	98.1	84.3
Export sales stabilization	(12.9)	28.5	(13.1)	(12.5)	(10.5)
Generation equalization	(10.3)	(39.2)	(3.2)	(2.3)	8.0
Goodwill	0.0	(0.1)	0.1	0.0	0.0
Net income	25.1	8.4	26.2	47.6	36.0
Interest coverage ratio (1)	1.10x	1.04x	1.14x	1.25x	1.17x

Balance Sheet Information (in $millions)

Assets — March 31 — 1992		1991	1990	1989	1988
Net fixed assets	3302.0	2821.3	2456.1	2388.9	2362.6
Current assets	316.2	225.1	216.8	235.8	309.7
Deferred charges	158.3	144.2	163.7	106.3	173.9
Total assets	3776.5	3190.6	2836.6	2731.0	2846.2
Liabilities					
Long-term debt	2342.5	1930.8	1731.0	1813.4	1793.8
Current liabilities	545.8	451.6	334.3	277.1	496.9
Deferred liabilities	465.1	410.1	381.7	277.1	123.7
Equity	423.1	398.1	389.6	363.4	431.8
Total liabilities and equity	3776.5	3190.6	2836.6	2731.0	2846.2
Debt ratio (2)	86.62%	85.29%	83.73%	84.40%	86.18%

Notes:

(1) Interest coverage ratio = (net income + interest expense - income from sinking funds and other investments)/ (interest expense - income from sinking funds and other investments)

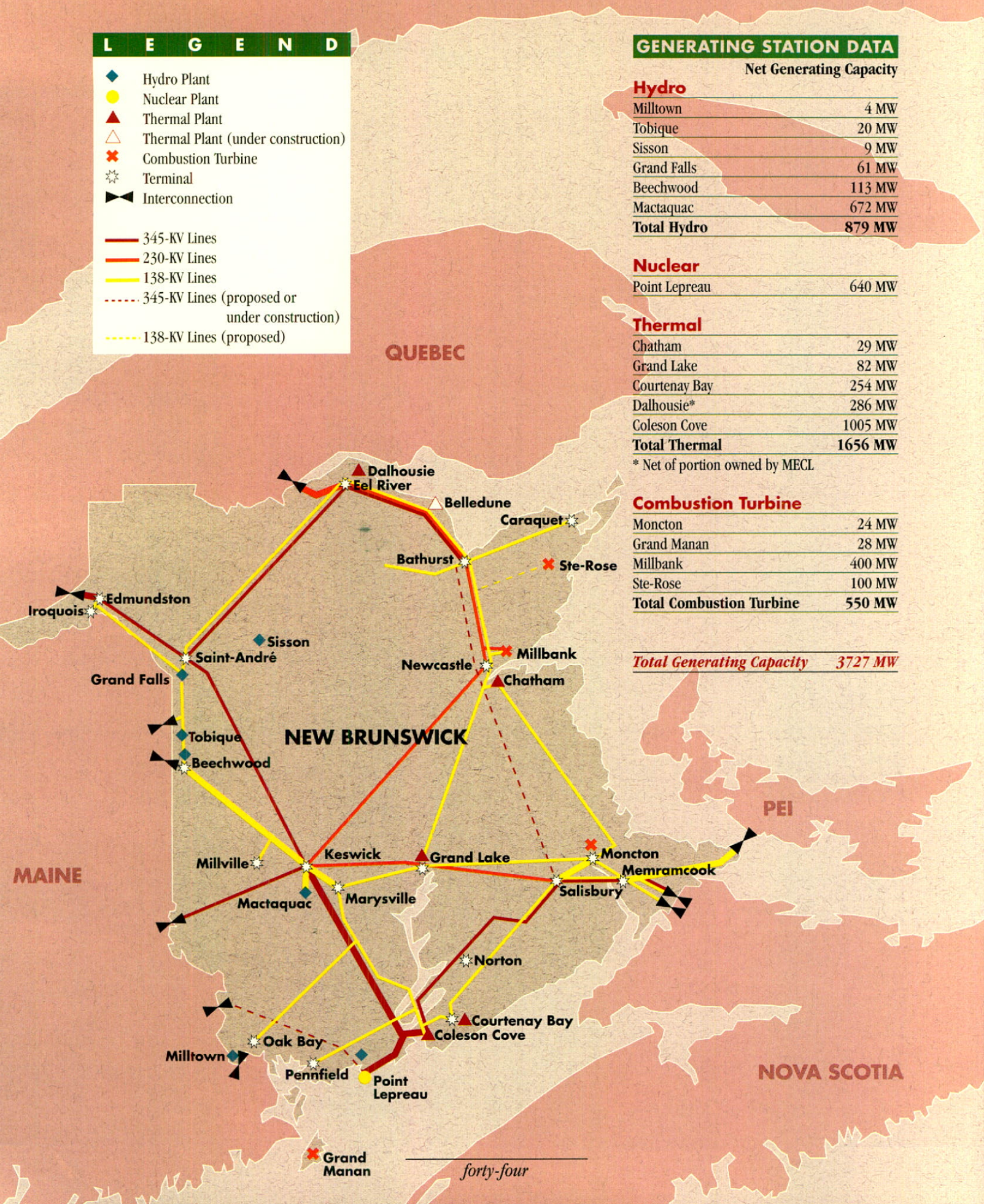
(2) Debt ratio = debt/debt + equity, where debt = Long-term debt + short-term indebtedness + irradiated fuel management, nuclear unit decommissioning and fuel channel removal - nuclear unit decommissioning + unfunded pension obligation (note 10)

Financial Statistics

Fiscal year —	1991/92	1990/91	1989/90	1988/89	1987/88
Energy costs (in $millions)					
Total cost of energy generated and purchased (gross)					
Hydro	0.0	0.0	0.0	0.0	0.0
Thermal	150.8	173.8	240.6	165.6	151.8
Nuclear	16.5	17.4	17.1	22.2	23.1
Diesel	2.0	0.1	0.9	0.2	0.3
Purchases	123.0	113.8	109.5	86.3	131.6
Total	292.3	305.1	368.1	274.3	306.8
Finance costs (in $millions)					
Interest expense	303.7	271.8	244.5	242.3	258.6
Income from sinking fund and other investments	(63.9)	(67.6)	(55.5)	(50.0)	(44.3)
Provincial government guarantee fee	13.8	12.0	9.0	10.0	
Amortization of debenture discount	3.4	2.6	2.3	3.1	3.9
Amortization of unrealized foreign exchange	(3.3)	15.9	3.9	(1.2)	22.3
Interest capitalized	(54.0)	(23.1)	(6.7)	(3.8)	(2.4)
Net financial expense	199.7	211.6	197.5	200.4	238.1
Other statistics					
Rate increase	-2.30%	6.90%*	0.00%	0.00%	0.00%
CPI (New Brunswick)	6.50%	4.60%	4.70%	3.60%	2.80%
GDP increases (New Brunswick)	-1.00%	1.60%	2.70%	3.20%	5.10%
Capital expenditures (millions)	$ 544.2	$ 463.6	$ 163.2	$ 120.1	$ 71.0
Change in total debt (millions)					
(net of sinking funds, cash and investments)	$ 402.0	$ 279.3	$ 6.2	$ (118.7)	$ (137.4)
% Break-down of long-term debt:					
Canadian dollar	70%	59%	63%	61%	46%
U.S. dollar	26%	33%	28%	31%	44%
Swiss franc	4%	8%	9%	8%	10%
Weighted average interest rate	9.68%	9.50%	9.53%	9.53%	10.06%

* effective January 16, 1991

S Y S T E M M A P



GENERATING STATION DATA

Net Generating Capacity

Hydro

Milltown	4 MW
Tobique	20 MW
Sisson	9 MW
Grand Falls	61 MW
Beechwood	113 MW
Mactaquac	672 MW
Total Hydro	**879 MW**

Nuclear

Point Lepreau	640 MW

Thermal

Chatham	29 MW
Grand Lake	82 MW
Courtenay Bay	254 MW
Dalhousie*	286 MW
Coleson Cove	1005 MW
Total Thermal	**1656 MW**

* Net of portion owned by MECL

Combustion Turbine

Moncton	24 MW
Grand Manan	28 MW
Millbank	400 MW
Ste-Rose	100 MW
Total Combustion Turbine	**550 MW**

Total Generating Capacity	*3727 MW*

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